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D117-762-041
Job Sheet 193004



Part No: D117-762-041 **Job Qty:** 1 pcs

Part Name: Replacement Skidtube



Part Weight: 0 lbs **Status:** New **Priority:** Medium
Job Created: 4/5/19 **Job Tracking No:**
Due Date: 4/24/19 **Created By:** Marie Lajeunesse
Type: SOLD **Description:**

Note: DWG D3582 REV E IPP Rev:A 07.06.11 New Issue EC IPP Rev:B 08-02-22 change to revA as per dwg DD verF by:EC IPP REV:C 15.06.11 AS PER CHG002 DD VERF:JLM IPP REV:D 16.02.05 DWG REV.C (ecn16-514) DD VERF:JLM IPP REV:E 17.01.17 as per dwg REV.D DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
130	Skidtubes - 1	1 pcs	4/24/19		0.00	3.47	Skidtubes - 1		
							Skidtubes - 2		
							Skidtubes - 3		
							Skidtubes - 4		
							Skidtubes - 5		BF
							Skidtubes - 6		
							Skidtubes - 7		
140	Skidtubes - 2 - B4B	1 pcs	4/24/19		0.00	3.47	Skidtubes - 1 - B4B		
							Skidtubes - 2 - B4B		
							Skidtubes - 3 - B4B		
							Skidtubes - 4 - B4B		
							Skidtubes - 5 - B4B		BF
							Skidtubes - 6 - B4B		
							Skidtubes - 7 - B4B		
150	QC 10	1 pcs	4/24/19		0.00	0.00	QC 10 - 10		
							QC 10 - 18		
							QC 10 - 24		
							QC 10 - 43		
							QC 10 - 50		
							QC 10 - 58		
							QC 10 - 9		
160	QC 5	1 pcs	4/24/19		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 43		

Plex 4/5/19 10:20 AM Dart.lajeunesse.marie

AUG 21 2019
DAS
50
9-89

					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	DAS
					QC 5 - 68	AUG 21 2019 68
					QC 5 - 9	9-89
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
					Handfinish - 1 - 1 - B4B	BE819-08-21
					Handfinish - 1 - 2 - B4B	
170 Handfinish - 1-1 Chemical-B4B	1 pcs	4/24/19	0.00 0.97		Handfinish - 1 - 3 - B4B	
					Handfinish - 1 - 4 - B4B	
					Handfinish - 1 - 5 - B4B	
					Handfinish - 1 - 6 - B4B	
					Handfinish - 1 - 7 - B4B	
					Handfinish - 1 - 8 - B4B	
					Handfinish - 1 - 9 - B4B	
					Handfinish - 1 - 10 - B4B	
					Handfinish - 1 - 11 - B4B	
					Handfinish - 1 - 12 - B4B	
					Handfinish - 1 - 13 - B4B	
					Handfinish - 1 - 14 - B4B	
					Handfinish - 1 - 15 - B4B	
					Handfinish - 1 - 16 - B4B	
					Handfinish - 1 - 17 - B4B	
					Handfinish - 1 - 18 - B4B	
					Handfinish - 1 - 19 - B4B	
					Handfinish - 1 - 20 - B4B	
					Handfinish - 1 - 21 - B4B	
					Handfinish - 1 - 22 - B4B	
180 QC 7	1 pcs	4/24/19	0.00 0.00		QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	
					QC 7 - 15	
					QC 7 - 17	
					QC 7 - 18	BE
					QC 7 - 19	
					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	
					QC 7 - 48	
					QC 7 - 51	

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				QC 7 - 58	
				QC 7 - 59	
				QC 7 - 60	
				QC 7 - 9	
				QC 7 - 68	
				QC 7 - 50	
				QC 7 - 67	
				QC 7 - 40	
190 Skidtubes - 3 - B4B	1 pcs	4/24/19	0.00 3.47	Skidtubes - 1 - B4B	
				Skidtubes - 2 - B4B	
				Skidtubes - 3 - B4B	
				Skidtubes - 4 - B4B	
				Skidtubes - 5 - B4B	BR
				Skidtubes - 6 - B4B	
				Skidtubes - 7 - B4B	
200 QC 10	1 pcs	4/24/19	0.00 0.00	QC 10 - 10	
				QC 10 - 18	
				QC 10 - 24	
				QC 10 - 43	
				QC 10 - 50	AUG 23 2019
				QC 10 - 58	DAS 5C 9-89
				QC 10 - 9	
210 QC 5	1 pcs	4/24/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	AUG 23 2019
				QC 5 - 9	DAS 68 9-89
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
215 Handfinish - 2-1 Pressure- B4B	1 pcs	4/24/19	0.00 0.97	Handfinish - 2 - 1 - B4B	BE B/A-08-27
				Handfinish - 2 - 2 - B4B	
				Handfinish - 2 - 3 - B4B	
				Handfinish - 2 - 4 - B4B	
220 Powdercoat - 1 White GI(A)- B4B	1 pcs	4/24/19	0.00 0.26	Powdercoat - 1 - B4B	
				Powdercoat - 2 - B4B	
				Powdercoat - 3 - B4B	BL 19-8-27
				Powdercoat - 4 - B4B	
230 QC 3	1 pcs	4/24/19	0.00 0.00	QC 3 - 10	
				QC 3 - 13	
				QC 3 - 15	ML 14-6-25
				QC 3 - 17	
				QC 3 - 18	
				QC 3 - 2	
				QC 3 - 28	
				QC 3 - 3	
				QC 3 - 30	
				QC 3 - 34	
				QC 3 - 36	
				QC 3 - 41	

				QC 3 - 51	
				QC 3 - 58	
				QC 3 - 59	
				QC 3 - 68	
				QC 3 - 9	
				QC 3 - 40	
				QC 3 - 19	
250 Handfinish - 4-1-Assembly-B4B	1 pcs	4/24/19	0.00 0.97	Handfinish - 4 - 1 - B4B	KL 14-8-25
				Handfinish - 4 - 10 - B4B	
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	
				Handfinish - 4 - 4 - B4B	
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
260 QC 5	1 pcs	4/24/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
270 Packaging 3-1 - Stock - B4B	1 pcs	4/24/19	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	

				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
275 DC - 1 - B4B	1 pcs	4/24/19	0.00 0.00	DC - 1 - B4B	
				DC - 2 - B4B	
280 QC 21 - FG	1 pcs	4/24/19	0.00 0.00	QC 21 - FG - 21	
				QC 21 - FG - 70	
				QC 21 - SA - 53	

Mod B

8/28/2019

AUG 28 2019

Part Op 130 - Skid tubes-1 (Skid tubes) 1-Cut Aft end using DT8185 2-Deburr ends 3-Drill Aft Cap holes using DT8678 *** OPEN
Descriptions: AFT CAP HOLE TO .187" *** 4-Locate DT 8973 from aft cap holes & Drill Ground wire hole on top of Tube. 5-Install 3/16 cleco in Ground wire hole, then drill all X-Bolt holes using 3/16" drill. 6-Drill pilot holes for wearplates using DT8900 7-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582. 8-Drill holes for D5520-1 doubler using DT10309 A & B, locating from 4th and 5th crossbolt holes from aft using .1875 clekos. Spot drill tube using #20 drill (note 10). Remove DT10309 B. Re-install DT 10309 A drill thru tube and doubler using #20 drill (note 10), cleco as you go. Remove .1875 clekos and open holes in tube and doubler to 0.750". Remove doublers and identify orientation. 9-Deburr doubler and doubler holes in skid tube. 10-Countersink doubler holes in skid tube as per Dwg. detail J and note 12 -Touch up alodine on D5520-1 doublers. 11- open ground wear holes to 0.391" as per section B-B 12-Open Aft Cap holes using .209" drill. 13-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size. 12-Do not open holes of section G-G to finishes size.
140 - Skid tubes-1 (Skid tubes) 1-Weld fwd cap D2964 per dwg D3582 and QSI 004 A/R AL ROD
Batch: 138989/139011 2-Grind flush
150 - QC10 (QC10- Inspect visual per QSI004- ground welds)
160 - QC5 (QC5- Inspect part completeness to step on W/O)
170 - HandFinish1 (Chemical Conversion Coat per QSI005 4.1)
180 - QC7-1 (QC7-Inspect Chemical Conversion Coat)
190 - Skid tubes-1 (Skid tubes) ***MASK OFF HOLES OF SECTION F-F (DO NOT C'SINK) 1-Open X-Bolt holes to finish size as per Dwg D3582, sections D-D, E-E, G-G as per Dwg. 2-Counter Sink X-BOLT holes as per Dwg D3582 D-D, E-E and G-G. ***Do NOT countersink holes of section F-F). 3-Deburr and blow out chips from inside of tube, prep. tube for welding. 4-Install doublers using DT10309 B. Shave rivets as required. 5-Bond web as per Dwg D3582 & QSI 015 A/R 241 Sika Flex Batch: 5200625 Exp Date: 07/25/2020 6- Swage x-bolt spacer as per dwg and Section F-F QSI002 7-Weld x-bolt spacers as per Dwg D3582 section D-D, E-E and G-G. A/R AL ROD
Batch: 138989 8-Grind welds flush
200 - QC10 (QC10- Inspect visual per QSI004- ground welds)
210 - (QC5- Inspect part completeness to step on W/O)
215 - HandFinish2 (Pressure Wash per QSI005 4.3/ Clean and remove all markings) Touch-up alodine as per QSI
220 - Powdercoat1 (White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum) START TIME _____ OVEN TEMPERATURE: _____ FINISH TIME: _____
230 - (QC3- Inspect Part Finish)
250 - HandFinish4 (Assemble as per dwg) 1-Inspect for Foreign objects 2-Install Aft cap as per Dwg D3582, Detail "C" A/R 241 Sika Flex Batch: 9124342 Exp Date: 12-12-8 3-Install Wearplates as per Dwg D3582 , Note:Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582 *****Do not install bolts where indicated on Dwg(Note #6)***** 4- Wing Walk as per Dwg D3582 and QSI 005 4.4
260 - (QC5- Inspect part completeness to step on W/O)
270 - Identify and pack for shipping as per PPP D117-762-041 Location :FG081
275 - (Document Control) Photocopy bluefile & type labels per PPP D117-762-041 CHG003
280 - (QC21- Final Inspection - Work Order Release)

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
D3582-1-BENT	Skidtube Assembly BK117	1 pcs (1 ea)	130-Skidtubes - 1	5171127
D5520-1	Doubler	2 pcs (2 ea)	130-Skidtubes - 1	5172448
D2964	Cap	1 pcs (1 ea)	140-Skidtubes - 2 - B4B	5146305
CR3212-5-05	Rivet	68 pcs (68 ea)	190-Skidtubes - 3 - B4B	5152507
D2971	Cross Bolt Spacer	1 pcs (1 ea)	190-Skidtubes - 3 - B4B	5097024
D3584-1	Web	1 pcs (1 ea)	190-Skidtubes - 3 - B4B	5174779
D3662-1	Crossbolt Spacer	3 pcs (3 ea)	190-Skidtubes - 3 - B4B	5173644
D3662-3	Crossbolt Spacer	1 pcs (1 ea)	190-Skidtubes - 3 - B4B	5181606
D5304-1	Crossbolt Spacer	2 pcs (2 ea)	190-Skidtubes - 3 - B4B	5148276
ALS4-1032-130	Rivnut	36 Ea (36 ea)	250-Handfinish - 4-1-Assembly-B4B	5057257
ALS4-428-165	Insert	2 Ea (2 ea)	250-Handfinish - 4-1-Assembly-B4B	5147562
AN3-5A	Bolt	2 Ea (2 ea)	250-Handfinish - 4-1-Assembly-B4B	5149158
AN3C4A	Bolt	28 Ea (28 ea)	250-Handfinish - 4-1-Assembly-B4B	5209364
AN4-4A	Bolt	2 Ea (2 ea)	250-Handfinish - 4-1-Assembly-B4B	5148662
D2965	Cap	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5145482
D3508-11	Wearplate Aft Center	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5146332
D3508-13	Wearplate Aft	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5177827
D3508-3	Wearplate Fwd Center	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5148243
D3508-9	Wearplate Fwd	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5145170
D3558-11	Gasket Aft Center	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5177366
D3558-13	Gasket Aft	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5177368
D3558-3	Gasket Center Fwd	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5177344
D3558-9	Gasket Fwd	1 pcs (1 ea)	250-Handfinish - 4-1-Assembly-B4B	5177339
NAS1149C0332R	Washer	28 Ea (28 ea)	250-Handfinish - 4-1-Assembly-B4B	5163136
NAS1149D0332J	Washer	2 Ea (2 ea)	250-Handfinish - 4-1-Assembly-B4B	5178370
NAS1149D0416J	Washer	2 Ea (2 ea)	250-Handfinish - 4-1-Assembly-B4B	5113115

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
130-Skidtubes - 1	D3582-1-BENT	1	2	0
	D5520-1	2	14	0
140-Skidtubes - 2 - B4B	D2964	1	13	0
190-Skidtubes - 3 - B4B	CR3212-5-05	68	1,225	0
	D2971	1	22	0
250-Handfinish - 4-1-Assembly-B4B	D3584-1	1	3	0
	D3662-1	3	6	0
	D3662-3	1	15	0
	D5304-1	2	39	0
	ALS4-1032-130	36	8,891	0
	ALS4-428-165	2	88	0
	AN3-5A	2	331	0
	AN3C4A	28	1,611	0
	AN4-4A	2	45	0
	D2965	1	71	0
	D3508-11	1	6	0
	D3508-13	1	6	0
	D3508-3	1	9	0
	D3508-9	1	6	0
	D3558-11	1	3	0
	D3558-13	1	4	0
	D3558-3	1	2	0
	D3558-9	1	2	0
	NAS1149C0332R	28	4,345	0
	NAS1149D0332J	2	3,628	0
	NAS1149D0416J	2	2,050	0

Part Specifications

Specifications could not be found.

ITEM	Qty	Part Number	Description
	X	D3582-041	SKIDTUBE ASSEMBLY
1	1	D2682-150	EXTRUSION
2	1	D2684	CAP
3	1	D2685	CAP
4	1	D2671	CROSS BOLT SPACER
5	1	D3508-3	WEARPLATE
6	1	D3508-9	WEARPLATE
7	1	D3508-11	WEARPLATE
8	1	D3508-13	WEARPLATE
9	1	D3508-3	GASKET
10	1	D3558-9	GASKET
11	1	D3558-11	GASKET
12	1	D3558-13	GASKET
13	1	D3584-1	WEB
14	3	D3682-1	CROSS BOLT SPACER
15	1	D3682-3	CROSS BOLT SPACER
16	2	D3504-1	CROSS BOLT SPACER
17	2	D3520-1	DOUBLER
18	28	AN3C4A	BOLT
19	2	AN3-5A	BOLT
20	2	AN4-4A	BOLT
21	28	NAS11480332R	WASHER (AN880C10L)
22	2	NAS11480332J	WASHER (AN880J10L)
23	2	NAS114900416J	WASHER (AN880J416L)
24	35	AELB-1032-130	INSERT
25	2	AL37-428-165	INSERT
26	68	CR3212-5-05	CSK RIVET, CHERRY MAX

- NOTES:
1) MATERIAL: N/A
2) FINISH: CHEMICAL CONVERSION COAT PER QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.1.
ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4
3) TOLERANCES: PER DART QSI 078 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED.
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: N/A
7) WEIGHT: 16.2 lbs
8) WELDING: PER DART QSI 004.
9) INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL
10) USE DART DRILL TEMPLATE DT0800 TO LOCATE AND DRILL Ø0.287 HOLES (38 PLACES) FOR WEARSHOE INSERTS. INSTALL
AELB-1032-130 PER SECTION G-G (38 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241-281.
11) DO NOT INSTALL AN3C4A BOLTS AND NAS11480332R WASHERS IN INDICATED LOCATIONS
12) LOCATE QTY (34) HOLES ONTO THE SKIDTUBE PER D6520-1 DOUBLER AND DRILL Ø0.161 THRU SKIDTUBE AND DOUBLER USING DT10308.
COUNTERSINK Ø0.288 x 100° (34 PL) PER DOUBLER AND INSTALL EACH D6520-1 DOUBLER USING QTY (34) CR3212-5-05 CSK RIVETS.

RELEASED
N 2017-08-11
EW17-547

- 1) MOVE VIEWS FROM SHT 1 TO SHT 2. ADD
ITEMS 17 & 26 AND NOTE 12-13. Ø0.187 HOLE
WAS Ø0.75. ADD SHT 3. ADD DETAIL J. SECTION
F-F ADD D5520-1. SCALE ON VIEWS WAS 3X.
2) D504-1 WAS D2672; REVISE BOM & SECTION F-F &
SECTION NOTES (ZN BT-3, AS-3; REF NCR16-5160
NOTES SHT 1.
3) D3482 PLUG ASSEMBLIES REMOVED. REFORMAT
NOTES SHT 1.
4) 20.88 WAS 20.87 (ZN C2-1). INCORPORATED DEO
D3582-A-1 (ZN DS-1). FORMAT TO CURRENT STD
5) NEW ISSUE

REV.	DESIGN	PH	DATE
E	DRAWN	AJS	17.03.27
D	CHECKED	APR	17.01.09
C	APPROVED	AP	15.11.02
B	APPROVED	RF	15.02.20
A	APPROVED	PH	07.08.03

DESCRIPTION
DART AEROSPACE USA, INC
EUGENE, OR

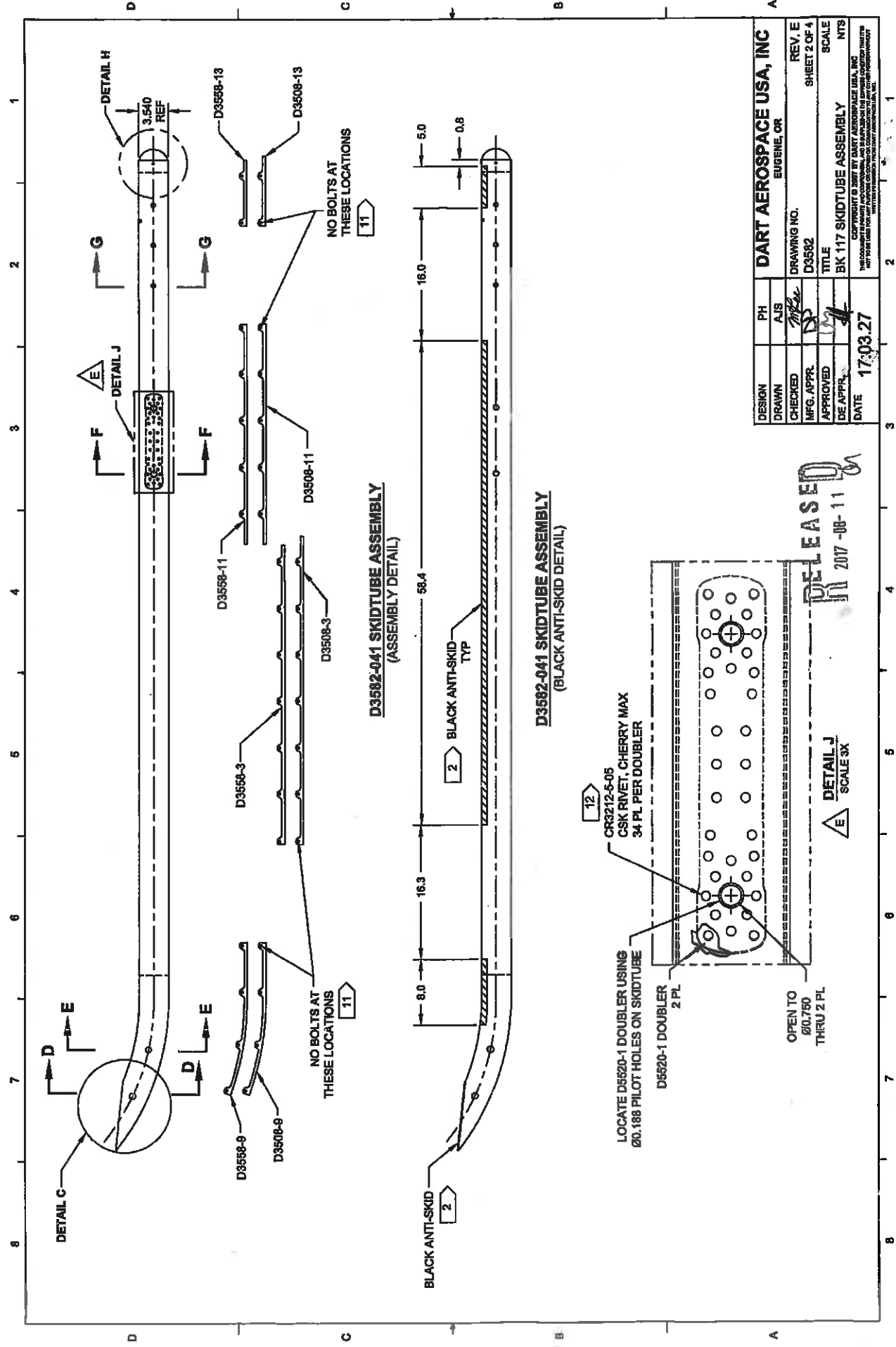
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DRAWN	AJS	17.03.27
CHECKED	APR	17.01.09
APPROVED	AP	15.11.02
APPROVED	RF	15.02.20
APPROVED	PH	07.08.03

DRAWING NO.
D3582

REV. E
SHEET 1 OF 4

TITLE	SCALE
BK 117 SKIDTUBE ASSEMBLY	NTS
DATE 17.03.27	NTS

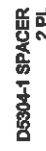
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SECTION F-F
SCALE 4X
2 PL

SECTION F-F NOTES
AFTER BENDING AND DRILLING ASSY
PERFORM THE FOLLOWING:
 1. INSERT D3304-1 SPACER
 2. SWAGE TO Ø0.565 ±0.005/-0.000 X 1.0
 DEEP PER OSI 002
 3. OPEN THRU HOLE TO Ø0.625
 4. GRIND FLUSH



SECTION G-G
SCALE 4X

SECTION G-G NOTES
AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 48"
2. INSERT D3682-1 SPACER (3 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.515 DRILL TO REMOVE SPILL

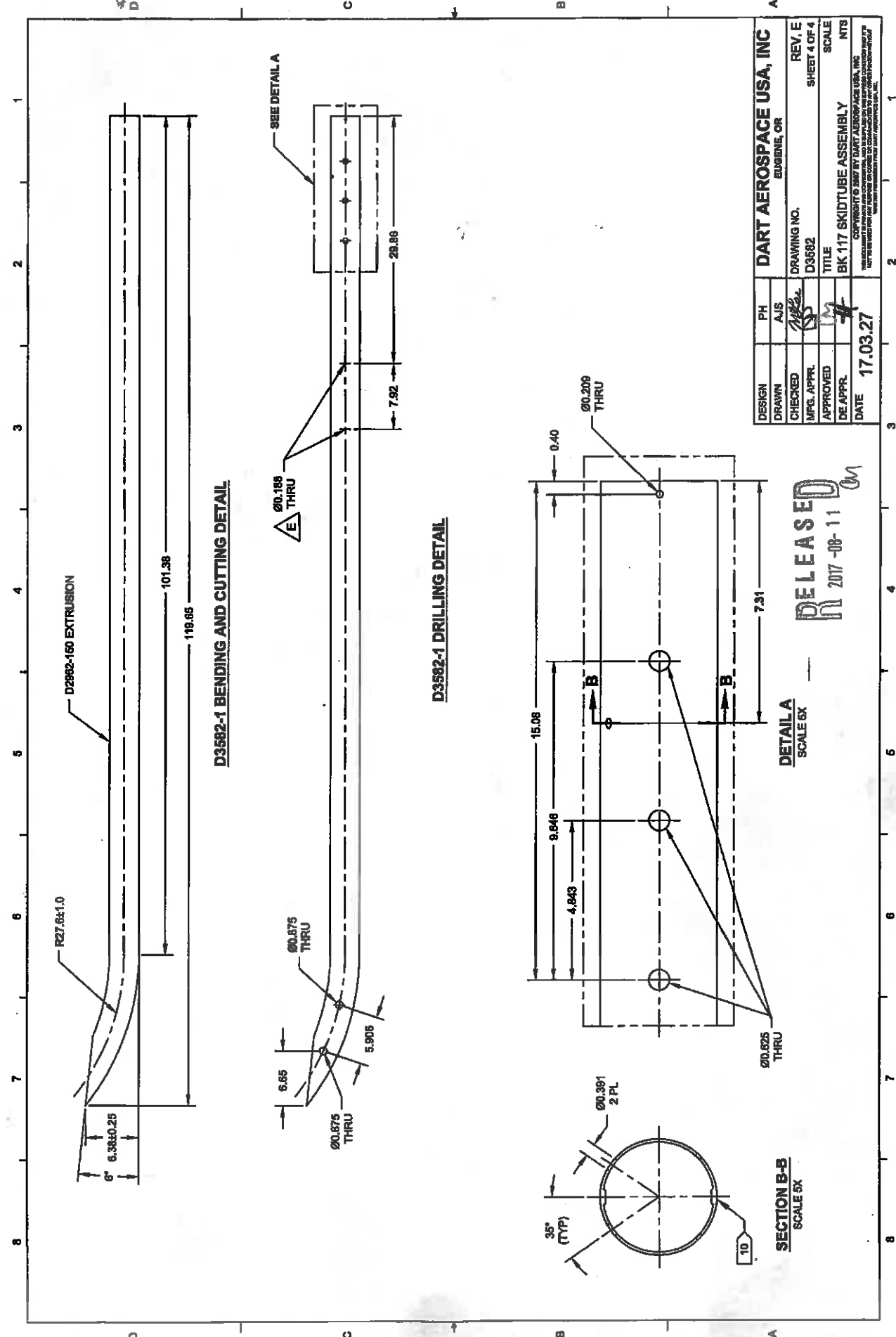


DETAIL H
SCALE 4X

DESIGN	PH
DRAWN	AJS
CHECKED	<i>MLC</i>
MFG. APPR.	<i>[Signature]</i>
APPROVED	
DE APPR.	
DATE	17.03.27

DESIGN	PH
DRAWN	AJS
CHECKED	<i>MLC</i>
MFG. APPR.	<i>[Signature]</i>
APPROVED	
DE APPR.	
DATE	17.03.27

RELEASED
2017-08-11



Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



Route update only

NCR No. _____

Job: _____ Part No. _____		DISPOSITION ☐ Rework ☐ Scrap ☐ Use-as-is		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QS042)			
Description Work Order Deviation		Disposition					
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY					
		Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: _____		Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐	
		Completed By					
		Lead hand / Supervisor					
		QC / QA Coordinator					